

Amendments to the Claims

Claim 1 (cancelled)

Claim 2 (currently amended) The open type luminaire lens of claim 1 21 wherein said elliptical reflective lens is manufactured from glass and said metalized surface is comprised of an aluminum coating.

Claim 3 (currently amended) The open type luminaire lens of claim 1 21 wherein said elliptical reflective lens is manufactured from glass and said metalized surface is comprised of a silver coating.

Claim 4 (currently amended) The open type luminaire lens of claim 1 21 wherein said elliptical reflective lens is manufactured from plastic and said metalized surface is comprised of an aluminum coating.

Claim 5 (currently amended) The open type luminaire lens of claim 1 21 wherein said elliptical reflective lens is manufactured from plastic and said metalized surface is comprised of a silver coating.

Claim 6 (currently amended) The open type luminaire lens of claim 1 21 wherein said prism section covers substantially all of said elliptical reflective lens.

Claim 7 (cancelled)

Claim 8 ^{currently}
(amended)

An open type luminaire lens comprising:

a non-circular reflective lens having a metalized exterior surface and a prism section, said non-circular reflective lens having a shape generally defined by the combination of two parabolas, said prism section including and an array of external reflecting prisms of varying predetermined shapes and varying predetermined sizes, said predetermined shapes and predetermined sizes defined by the relationship of angles A, B and P where angle A is defined by a counter clockwise angle from the leading point of a first prism to the convergence point of said first prism and a next adjoining prism, angle B is defined by a clockwise angle from the leading point of said first prism to the convergence point of said first prism and said next adjoining prism and angle P is starts along minor axis ($y=0$) and has a value of 90 degrees along the major axis $x=0$ with angle A, angle B and angle P having the following relationship:

Angle A = $P + 8$; for values $0 \leq P \leq 9$; and

Angle A = $21.305\text{Ln}(P) - 41.714$; for values of $10 \leq P \leq 44$ degrees;

and

Angle A = $(-0.0078)P^2 + 0.9513P - 4.6875$; for values $46 \leq P \leq 90$ degrees

Angle B = $0.0049P^2 - 0.7615P + 91.437$; for $0 \leq P \leq 44$ degrees;

and

Angle B = $0.0075P^2 - 0.9243P + 93.869$; for values $46 \leq P \leq 88$ degrees.

Angle B = $P - 20$; for values $89 \leq P \leq 90$ degrees.

Claim 9 (original)The open type luminaire lens of claim 8 wherein said elliptical reflective lens is manufactured from glass and said metalized surface is comprised of an aluminum coating.

Claim 10 (original) The open type luminaire lens of claim 8 wherein said elliptical reflective lens is manufactured from glass and said metalized surface is comprised of a silver coating

Claim 11 (original) The open type luminaire lens of claim 8 wherein said elliptical reflective lens is manufactured from plastic and said metalized surface is comprised of an aluminum coating.

Claim 12 (original) The open type luminaire lens of claim 8 wherein said elliptical reflective lens is manufactured from plastic and said metalized surface is comprised of a silver coating.

Claim 13 (original) The open type luminaire lens of claim 8 further including a diffuse material insert.

Claim 14 (original) An open type luminaire lens system for maximizing light distribution comprising:

an open type reflective luminaire lens having a generally elliptical shape, said luminaire lens having a metalized exterior surface;

an external prism section disposed on said luminaire lens having external reflecting prisms of varying predetermined sizes and varying predetermined shapes whereby desired light distributions of different types can be produced by changing the sizes and shapes of said external reflecting prisms whereby the shape of the open type reflective luminaire lens is defined by the surface envelope general equation

$x^2/a^2 + y^2/b^2 = 1$ with $z =$ being in a range from 0.0 to 11.0, a in a range from 3.0 to 12.0 and b in a range from 3.0 to 12.0.

Claim 15 (original) The open type luminaire lens system of claim 14 wherein said elliptical reflective lens is manufactured from glass and said metalized surface is comprised of an aluminum coating.

Claim 16 (original) The open type luminaire lens system of claim 14 wherein said elliptical reflective lens is manufactured from glass and said metalized surface is comprised of a silver coating.

Claim 17 (original) The open type luminaire lens system of claim 14 wherein said elliptical reflective lens is manufactured from plastic and said metalized surface is comprised of an aluminum coating.

Claim 18 (original) The open type luminaire lens system of claim 14 wherein said elliptical reflective lens is manufactured from plastic and said metalized surface is comprised of a silver coating.

Claim 19 (original) The open type luminaire lens system of claim 14 further including a diffuse material insert.

Claim 20 (original) The open type luminaire lens system of claim 14 whereby said predetermined shapes and predetermined sizes of said prisms are defined by the relationship of angles A, B and P where angle A is defined by a counter clockwise angle from the leading point of a first prism to the convergence point of said first prism and a next adjoining prism, angle B is defined by a clockwise angle from the leading point of said first prism to the convergence point of said first prism and said next adjoining prism and angle P is starts along minor axis ($y=0$) and has a value of 90 degrees along the major axis $x=0$ with angle A, angle B and angle P having the following relationship:

Angle $A = P + 8$; for values $0 \leq P \leq 9$; and

Angle $A = 21.305 \ln(P) - 41.714$; for values of $10 \leq P \leq 44$ degrees;

and

Angle $A = (-0.0078)P^2 + 0.9513P - 4.6875$; for values $46 \leq P \leq 90$ degrees

Angle $B = 0.0049P^2 - 0.7615P + 91.437$; for $0 \leq P \leq 44$ degrees;

and

Angle B = $0.0075P^2 - 0.9243P + 93.869$; for values $46 \leq P \leq 88$ degrees.

Angle B = $P - 20$; for values $89 \leq P \leq 90$ degrees.

Claim 21 (new) An open type luminaire lens, comprising:

an elliptical reflective lens having a metalized exterior surface and a prism section covering at least twenty-five percent of said elliptical reflective lens, said prism section including an array of external reflecting prisms of varying predetermined shapes and varying predetermined sizes whereby a desired efficient light distribution is produced, the lens further including a diffuse material insert.